

to 3,400 feet and on the top of the McKinnon Pass there were many varieties of alpine plants - dwarf Celmisias, mat Raoulias, particularly the blue-grey soft mat of R. bryoides and R. grandiflora with its large flowers buried in the stiff silvery leaves. There were sundews, Helichrysum and dwarf species of coprosma and Hebe.

To return to the Hollyford, the richness and variety of the forest cannot be explained by the rainfall alone (dreadful as it is!) and the list of plants to be found would be very long - Nothofagus, rimu, weinmannia, miro, rata, which by January was a blaze of red, and Olearias, (Olearia ilicifolia and O. arborescens were the most conspicuous.) Surprisingly for such a cold, wet place there were masses of Fuchsia exortica.

The track from the Lower Hollyford to Lake Howden was a beautiful climb through bush (about 3 hours). There were some lovely local associations - patches of the delicate Libertia pulchella, growing in the moss nearby a bank with red Nertera berries and higher on the tree trunks Enargea with its odd shaped white fruits and twisted petioles. Clumps of Prince of Wales feather added to the beauty of the forest floor and the occasional specimens of Cordyline indivisa gave variety to the foliage.

There were many interesting and beautiful plants to be found - Dawsonia superba, Maori "strawberries" (Cyttaria) fallen from the beech trees, masses of lovely ground orchids, mostly Pterostylis banksii, and, finally although really the most wonderful, the green wealth of mosses and fern which make our N.Z. rain forests varied and beautiful."

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Miss Vivien Dellow, M.A., is at present engaged on an exacting and farflung research on the seaweeds of the Hauraki Gulf, trying to record species, their locations, frequency etc., Recently she made a successful expedition to the Little Barrier, and has been kind enough to send us an account of seaweeds on that strange sandless coastline.

SEAWEED VEGETATION OF LITTLE BARRIER ISLAND

During the latter half of last October the writer and Miss Alison Lush of the Dominion Museum were fortunate enough to spend a fortnight on Hauturu, the far-famed bird and plant

sanctuary, in connection with a research project on the algal ecology of the Hauraki Gulf. Strangely enough, very little notice has hitherto been taken of the seaweeds of Little Barrier, there being but one list published by A.D. Cotton (Kew Bulletin 1912), from a collection made by Miss Edith Smith early this century. As a result of the present survey, 30 new records will be added to Cotton's list.

The coastline of Little Barrier is quite different from that of the mainland; for the familiar sandy beaches and rocky promontories of the latter are replaced by a continuous line of boulders from the base of high cliffs to below low water mark and these are subject to considerable movement by wave action. The amount of movement varies with strength and direction of gales. Of course this affects the nature of the biotic communities in the intertidal region to some extent. The chief effect is seen in the comparative scarcity, or even absence, from the upper littoral not only of algae, but also of the barnacle and oyster communities which are so characteristic of corresponding levels on neighbouring coastlines. The water is so clear that in calm weather one can look down over the side of a boat for several fathoms and see submerged "forests" of the larger brown algae gently moving in the sea-currents.

At half-tide mark, Enteromorpha procera appears sporadically, together with species of Porphyra; but algae do not come into their own until the level of low water neap tide, where there is a sudden increase in both number and individuals of species. Here there is a striking display of colour - first the bright green of Ulva lactuca intermingled with brown crusts of Ralfsia verrucosa and Hapalospongidion saxigenum; and then a dark red turf formed by Gelidium caulacanthum and species of Gigartina and Polysiphonia. Pale pink Lithothamnion (a general term for encrusting Corallines) are also a notable feature of this tide level.

About mean low water of spring tides, the larger brown algae assume dominance, notable species being Xiphophora Chondrophylla, Glossophora kunthii and Hea fascia. At E.L.W.S. Carpophyllum plumosum is profoundly dominant, with Spatoglossum chapmanii and C. maschalocarpum locally abundant. Spatoglossum has so far been recorded elsewhere in the Gulf only from the Coromandel Peninsula.

Below the lowest tide level we found the beautiful pink Asparagopsis armata, Pterocladia lucida and P. capillacea, Pleonosporium hirtum and several species of Laurencia, as well as Halopteris hordacea, Colpomenia sinuosa and many others, which will be listed at a later date.

Both Miss Lush and I will always retain many happy memories of this expedition, and I should like to express my sincere thanks to Miss M.W. Crookes for being largely instrumental in making possible such a successful and enjoyable trip.

- Vivien Dellow, A.U.C.

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W A N T E D

We would draw readers' attention to the following request just received from Mr. F. Jollie on behalf of the Auckland City Council Parks' Department.

"May I once more ask your Society's help in collecting native plant seeds. I enclose herewith a list of our particular wants. We are receiving numerous requests from overseas, and your Society will be interested to know that we have forwarded 321 packets of seeds during 1949. Some of the places to which seeds have been sent are, Greece, Italy, Norway, Sweden, Egypt, Germany, Canary Islands, Singapore, India and Switzerland. Even small amounts of the more rare natives are welcome. Thanking you for the generous help and interest you have given us during the last two years."

New Zealand native seeds required for overseas distribution by Auckland Parks and Reserves Department:

Agathis australis	Hedycarya arborea
Librocedrus plumosa	Alectryon excelsum
Podocarpus nivalis	Metrosiderus diffusa
" totara	" hypericifolia
Phyllocladus trichomanoides	Fuchsia excorticata
Meryta sinclairi	" procumbens
Schefflera digitata	" colensoi
Helichrysum glomeratum	Pittosporum buchananii
Griselinia littoralis	" cornifolium
" lucida	" fairchildii
Dracophyllum latifolium	" huttonii